

ACC NR: AP6035689 (A,N) SOURCE CODE: UR/0413/66/000/019/0032/0032

INVENTOR: Ponomarev, V. V.; Shapatin, A. S.; Golubtsov, S. A.

ORG: none

TITLE: Preparation of organosilicon derivatives of styrylphosphonic acid, Class 12, No. 186477

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 32

TOPIC TAGS: organosilicon compound, ~~styryl~~ phosphonic acid, *styrene*

ABSTRACT: In the proposed method, organosilicon derivatives of styrylphosphonic acid of the type:  $Cl_nR_{3-n}SiC_6H_4CH=CHP(O)Cl_2$ , where  $n = 0, 1, 2$ , and R is an alkyl, are obtained by the reaction of organosilicon derivatives of styrene with phosphorus pentoxide at temperatures from  $-40^\circ$  to  $100^\circ C$  with subsequent decomposition of the complex formed.

[PS]

[WA-50; CBE No. 14]

SUB CODE: 07/ SUBM DATE: 28Aug65

Card1/1

UDC: 547.419.1'419.5.07

GOLUBTSOV, V.A.; SMIRNOV, A.S., irzh.

Determining the efficiency of boiler units. Teploenergetika 8  
no.6:93-94 Je '61. (MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Golubtsov).  
(Boilers)

GOLUBTSOV, V.A.; SOLYAKOV, V.K.

Certain characteristics of the thermal conversion process of fuel  
with a fine-grained solid heat-transfer agent. Energotekh.  
ispol'. topl. no.2:138-145 '62. (MIRA 16:5)

1. Chlen-korrespondent AN SSSR (for Golubtsov).  
(Coal~Carbonization)

GOLUBTSOV, V.A., prof.; STYRIKOVICH, M.A., prof. MARGULOVA, T.Kh.,  
doktor tekhn. nauk, prof.

Water cycle norms of thermal electric power plants. Teploener-  
getika 10 no.10:79-81 0'63 (MIRA 17:7)

1. Moskovskiy energ. ticheskoy institut. 2. Chleny-korrespon-  
denty AN SSSR (for Golubtsov, Styrikovich.

GOLUBTSOV, V.A., prof.; GROMOGLOSOV, A.A., kand. tekhn. nauk

Method for calculating fractional ionite composition of composite  
H-OH ion exchange filters. Teploenergetika 11 no.11:54-58 N '64.  
(MIRA 17:12)

1. Moskovskiy energeticheskiy institut. 2. Chlen-korrespondent  
AN SSSR (for Golubtsov).

GOLUBTSOV, V.A.; BELOSEL'SKIY, B.S.; BI TSZE-TSZIN [Pi Chieh-ching]

Using a liquid heat carrier in studying the process of the  
thermal decomposition of fuel. Ispol'. tverd. topl., ser.  
maz. i gaza no. 5:94-101 '64 (MIRA 19:2)

15-57-5-5775

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,  
p 9 (USSR)

AUTHOR: Golubtsov, V. K.

TITLE: Lower Carboniferous Deposits in the Region of Slovechno  
(O nizhnokamennougol'nykh otlozheniyakh rayona  
Slovechna--in Belorussian)

PERIODICAL: Vestsi AN BSSR, 1954, Nr 2, pp 118-123.

ABSTRACT: Bibliographic entry.

Card 1/1

GOLUBTSOV, V. K.

USSR/Geology      Coal

Card                : 1/1

Authors            : Golubtsov, V. K.

Title               : Coal deposits in the El'sk region (Pripyatskoe Polesye) Byelorus-SSR

Periodical        : Dokl. AN SSSR, 97, Ed. 1, 133 - 135, July 1954

Abstract           : The stratigraphic location of the coal deposits of the El'sk region is explained. Seven USSR references.

Institution        : Acad. of Sc. Byelorus-SSR, Institute of Geological Sciences

Presented by      : Academician, N. S. Shatskiy, April 20, 1954



GOLUBTSOV, V.K.; KOVALEN, B.S.; YARTSEVA, M.V.

Middle Carboniferous Bashkir-stage deposits discovered in the Pripet depression (southeastern White Russia). Dokl. AN SSSR 110 no.2:257-259 S '56. (MLRA 9:12)

1. Institut geologicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom N.S. Shatskim.  
(Pripet Valley--Geology, Stratigraphic)

GOLUBTSOV, V.K.

Lower boundary and volume of the Tula horizon of the lower Carboniferous in the Pripet Depression. Dokl. AN SSSR 111 no.6:1305-1307  
D '56. (MIRA 10:3)

1. Predstavleno akademikom N.S. Shatskim.  
(Pripet Valley--Geology, Stratigraphic)

LUKASHEV, K.I., akademik, red.; GLEBKOV, P.F., akademik, red.; VEYNIK, A.I., red.; BULYGIN, I.A., red.; GOLUBTSOV, V.K., kand.geologe-mineralog.nauk, red.; MARIKS, L., red.izd-va; VOLOKHANOVICH, I., tekhn.red.

[Papers at the Conference of Young Scientists of the Academy of Sciences of White Russia] Materialy konferentsii molodykh uchenykh Akademii nauk BSSR. Minsk, 1958. 178 p. (MIRA 12:3)

1. Akademiyanauk BSSR, Minsk. 2. Akademiya nauk BSSR (for Lukashov, Glebko). 3. Chlen-korrespondent Akademii nauk BSSR (for Veynik, Bulygin).  
(Science)

GOLOBTsov, V.K.

5(5) **TRANS I BOOK EXPLANATION** 807/8077  
 Zhukovskiy msk Belorusskoy SSR, Minsk, Institut geologicheskikh nauk  
 Trans. 1 (Transactions of the Institute of Geological Sciences of the  
 Belorussian SSR Academy of Sciences) No. 1, Minsk, 1958. 27 p. 700 copies  
 printed. Extra copy inserted.  
 Editorial Board: A.I. Arsen'yev, A.Y. Puzanov, and V.M. Rubtsov  
 M. of Publishing House: Ye. G. Burdakov; Tech. Ed.: I. Volchukovich.  
 PREFACE: This issue of the Institute's Transactions is intended for geologists  
 interested in both the physical and historical geology of Belorussia.  
 CONTENTS: This collection of articles on the geology of Belorussia has been  
 prepared by members of the Institute's Geological Institute. Individual papers  
 discuss the prospects of future development of Belorussia's geological and  
 geophysical studies, problems in the geology of sedimentary rocks, and  
 questions in paleontology and hydrogeology. Also the papers on historical  
 geology are a study of the development of Paleozoic and Mesozoic  
 analysis of Lower Carboniferous horizons. References accompany each article.

Card 1/5

Transactions of the Institute (cont.)	807/8077
TABLE OF CONTENTS:	
From the Editor	
Belorusskoy, E.I., and A.I. Arsen'yev. Problems in the Geology of Belorussia	3
Puzanov, A.Y. Basic Stages in the Development of Paleontology in the Geologic Past	5
Rubtsov, A.I. Basic data on the Early Paleozoic in Belorussia	10
Edo, G.I. The Spore - Pollen Characteristics of the Lower Carboniferous Horizons in Belorussia	30
Golobtsov, V.K. The Stratigraphic Pattern of the Permian-Triassic of the Irkutsk Territory	46
	57

Card 2/5

GOLUBTSOV, V.K.; KEDO, G.I.

Geological section of the area of Davydovka, Dokl. AN BSSR  
2 no.10:423-427 N '58. (MIRA 12:8)

1. Predstavleno akademikom AN BSSR K.I. Lukashevym.  
(Davydovka (Gomel' Province)--Geology, Stratigraphy)

MANYKIN, S.S.; GOLUBTSOV, V.K., red.; MARIKS, L., red. izd-va; SIDERKO, N., tekhn. red.

[Stratigraphy of Tertiary sediments in White Russia] Strati-  
grafiia tretichnykh otlozhenii Belorussii. Minsk, Izd-vo Akad.  
nauk BSSR, 1959. 151 p. (MIRA 12:9)  
(White Russia--Geology, Stratigraphic)

GOLUBTSOV, V.K.; KEDO, G.I.

Lower Viséan sediments of the Chernigov key borehole. Dokl.  
AN BSSR 3 no.9:383-386 8 '59. (MIRA 13:2)

1. Predstavleno akademikom AN BSSR K.I. Lukashevym.  
(Chernigov region--Geology, Stratigraphic)

GOLUBTSOV, V.K.; BRUSENTOV, A.N.; USENKOV, F.M.

Coal yield prospects of coal deposits of the Pripet Lowland.  
Dokl.AN BSSR 3 no.10:408-412: 0 '59. (MIRA 13:2)

1. Predstavleno akademikom AN BSSR K.I.Lukashovym.  
(Pripet Valley--Coal)



3(5)

AUTHORS:

Golubtsov, V. K., Kedo, G. I.

SOV/20-127-1-43/65

TITLE:

On the Occurrence of Sediments of the Yasnopolyanskaya Sub-stage of the Lower Carboniferous in the Chernigov Deep Well (K nakhodke otlozheniy yasnopolyanskogo pod"yarusa nizhnego karbona v Chernigovskoy opornoy skvazhine)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 1, pp 159-161 (USSR)

ABSTRACT:

The deep well mentioned in the title was drilled in the time from 1949 to 1951 in the surroundings of the city of Lyubech. It has been dealt with in a number of articles (Refs 1-5). All authors agree on the absence of Tournaisian and Lower Visean (Yasnopolyanskiye) sediments in the cross section of the deep well in question. On the strength of a detailed description of the cross section and of studies made concerning the micro-fauna as well as the spore-pollen complexes, the authors of the present paper intended to define a part of the former in detail. A subdivision (without description) of the Visean Stage was supplied by reference 7. The age of the effusive-sedimentary mass is stated as being the Upper Devonian (Famennian). The authors place the top of this mass at a depth

Card 1/3

On the Occurrence of Sediments of the Yasnopolyans- SOV/20-127-1-43/65  
kaya Substage of the Lower Carboniferous in the Chernigov  
Deep Well

of 1592.0 m; carbon rests upon it up to 1018 m. The contact between Devonian and Carboniferous is very close here. The mass in question consists at the contact of brecciated tuffaceous rock interspersed with kaolin and with pyrite in the upper part. It is an old weathered crust. Sandstone rests upon it very transgressively; it occasionally passes over to aleurolite. Rare thin intermediate layers of dark-gray to black sandy loams along with large quantities of carbonized fossil plants may be found in there. Also rhizoids are present. Numerous spores were identified from such a loam intermediate layer. The spore complex may be well compared with those of the 2nd horizon of the productive suite of the Vskhodskiy Rayon in the Smolensk oblast' and of the 3rd horizon in the Eastern and South-western part of the Podmoskovnyy Basin. The Stalinogorskiy horizon is 6 m thick. Again numerous spores were identified in two samples of the higher resting (1,586-1,562.0 m) predominantly loamy mass. The enclosing rocks are ascribed by the authors to the lower Tul'skiy horizon, and are brought into correlation with S. N. Naumova's XVI complex (Refs 7,8). The lower Tul'skiy horizon is

Card 2/3

On the Occurrence of Sediments of the Yasnopolyansk- SOV/20-127-1-43/65  
aya Substage of the Lower Carboniferous in the Chernigov  
Deep Well

24.0 m thick here. A loam mass with two calcareous intermediate layers (1,548-1,562 m) lies above. A rich foraminiferal fauna found here was defined in references 1-3. Forms which are typical of the Aleksinskiy horizon (Refs 7,9) are missing here. On the other hand, those typical of the Upper Tul'skiy horizon are predominant, so that the authors ascribe the complex to this horizon. Loam of the Aleksinskiy age lies again above, between 1548 and 1513 m. There are 1 figure and 9 Soviet references.

ASSOCIATION: Institut geologicheskikh nauk Akademii nauk BSSR (Institute of Geological Sciences of the Academy of Sciences, Belorussian SSR)

PRESENTED: February 23, 1959, by N. S. Shatskiy, Academician

SUBMITTED: January 20, 1958

Card 3/3

GOLUBTSOV, V.K. [Halubtsou, V.K.]; KEDO, G.I. [Keda, H.I.]

Stratigraphy of the Tournai stage of the lower Carboniferous in the  
Pripet fault region. Vestsi AN BSSR. Ser. fiz.-tekhn. nav. no.3:92-105  
'59. (MIRA 13:3)

(Pripet Valley--Geology, Stratigraphy)

GOLUBTSOV, V.K. [Halubtson, V.K.]

Problem of correlating sections of the Mozyr key well. Vestsi AN  
BSSR.Ser.fiz.-tekhn., no.1:131-136 '60. (MIRA 13:7)  
(Kalinkovichi District--Geology, Stratigraphic)

KEDO, G.I.; GOLUBTSOV, V.K.

Ozerki and Khovanina beds in the Pripte fault. Trudy Inst. geol.  
nav. An BSSR no. 2:78-89 '60. (MIRA 13:12)  
(Pripet Valley--Geology, Stratigraphic)

GOLUBET, V. V.

Triassic sediments of the Pripet fault. Trudy VNIGMI  
no. 29:84-97 vol. 1 1960. (MIFA 14:7)  
(Pripet Valley--Geology, Stratigraphy)

GOLUBTSOV, V.K.; BRUSENTOV, A.N.

Sediments of the Moscow stage in the Pripet Graben. Dokl. AN  
BSSR 4 no. 11:474-477 M '60. (MIRA 13:12)

1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikrom  
AN BSSR K.I. Lukashevym.

(Pripet Valley--Geology, Stratigraphic)



GOLUBTSOV, Vasilii Kuz'mich, nauchnyy sotr.; MAKHNACH, Aleksandr Semenovich,  
nauchnyy sotr.; BARABANOVA, Ye., red. izd-va; VOLOKHANOVICH, I.,  
tekhn. red.

[Paleozoic and early Mesozoic facies in White Russia] Fatsii ter-  
ritorii Belorussii v paleozoe i rannem mezozoe. Minsk, Izd-vo  
Akad. nauk BSSR, 1961. 181 p. (MIRA 14:10)

1. Institut geologicheskikh nauk AN Belorusskoy SSR (for Golubtsov,  
Makhnach).

(White Russia—Geology, Stratigraphic)

GOLUBTSOV, V.K.; NEWMERZHITSKAYA, Z.M.

Recent data on sediments of the Chernigov series of the lower Permian in the southeastern part of the Pripet fault. Dokl. AN BSSR 5 no. 2:81-85 F '61. (MIRA 14:2)

1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikom AN BSSR G.V. Borgomolovym.  
(Pripet Valley—Geology, Stratigraphic)

MAKHINACH, A.S.; KUROCHKA, V.P.; GOLUBETSOV, V.K.

Ruptures in the Strelichevo upheaval of the Pripet downwarping,  
their extent and age. Dokl. AN BSSR 5 no.8:352-356 Ag '61.  
(MIRA 14:8)

1. Institut geologicheskikh nauk AN BSSR.  
(Strelichevo region—Geology, Structural)

GOLUBTSOV, V.K.

Find of Permian deposits in the southwestern part of White Russia  
(Brest Depression). Dokl. AN SSSR 139 no.1:166-169 J1 '61.  
(MIRA 14:7)

1. Institut geologicheskikh nauk AN BSSR. Predstavleno  
akademikom N.M. Strakhovym.  
(Brest Province--Geology, Stratigraphic)

GOLUBTSOV, V.K. [Halubtsou, V.K.]

Sediments of the Carboniferous system of the Rechitsa region.  
Vests1 AN BSSR. Ser. fiz.-tekh. nav. no.3:75-80 '62.

(MIRA 18:3)

GOLUBTSOV, V.K.

History of the geological development of White Russia in the  
Paleozoic and early Mesozoic. Biul.MOIP Otd.geol. 37 no.1:149-150  
Ja-F '62. (MIRA 15:2)  
(White Russia--Geology)

GOLUBTSOV, V.K.

Discovery of deposits of the Miachkovo horizon of the Moscow stage in the Pripet trough. Dokl. AN SSSR 145 no.2:377-380  
Jl '62. (MIRA 15:7)

1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikom  
D.V. Malivkinym.  
(Pripet Valley--Geology, Stratigraphic)

GOLUBETSOV, V.K.

Kulikia; a new species of calcareous algae from the Vise stage.  
Paleont. i stratigr. BSSR no. 3:348-351 '61. (MIRA 15:2)  
(Pripet Valley—Algae, Fossil)



GOLUBTSOV, V. K. [Halubtsou, V. K.]

Aliaksandr Vasil'evich Fursenka; on his 60th birthday and his  
35 years in teaching and research. Vestsi AN BSSR. Ser. fiz.-  
tekh. nav. no.1:130-133 '63. (MIRA 16:4)

(Fursenka, Aliaksandr Vasil'evich, 1903-)

GOLUBTSOV, V.K. [Halubtsou, V.K.]; KEDO, G.I. [Keda, H.I.]

Geological cross section of the Polotsk region. Vestsi AN BSSR.  
Ser. fiz.-tekhn. nav. no.3:87-93 '63. (MIRA 16:10)

GOLUBTSOV, V.K.

Stratigraphy of Famennian sediments in the Pripet fault. Dokl.  
AN BSSR 9 no.3:175-179 Mr '65. (MIRA 18:6)

1. Institut geologicheskikh nauk Gosudarstvennogo geologicheskogo  
komiteta SSSR.

GOLUBTSOV, V.L. (g.Sverdlovsk); KONEV, V.L. (g.Sverdlovsk)

Slit-type ignition of single-anode mercury-arc rectifiers. Elek.i  
tepl.tlaga 3 no.5:39-41 My '59. (MIRA 12:9)  
(Mercury-arc rectifiers)

GOLUBTSOV, V. S.

Dissertation defended for the degree of Candidate of Historical Science in the  
Institute of History

"Urals Metallurgy During the First Years of Soviet Authority (1917-1923)."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

LAVRENT'YEV, P.F.; GOLUBTSOV, V.V.; PAKALN, E.V.

Distribution of annual precipitation in the watersheds of the  
lakes in the Balkhash-Alakul' Depression. Trudy KazNIGMI no.17:  
3-18 '62 (MIRA 18:2)

L 08918-67 EWT(1) GW

ACC NR: AR6025356

SOURCE CODE: UR/0269/66/000/004/0069/0070

AUTHOR: Golubtsov, V. V.

TITLE: On the reality of supercentury cycles of solar activity

SOURCE: Ref. zh. Astronomiya, Abs. 4.51.520

REF SOURCE: Solnechnyye dannyye, no.6, 1965, 70-75

TOPIC TAGS: sun, solar activity, sunspot, <sup>aplan</sup>~~sunspot~~ cycle, ~~supercentury sunspot cycle~~

ABSTRACT: An attempt was made to show the reality of supercentury oscillations of solar activity on the basis of an analysis of data on the persistency of the rise in 11-year cycles. Data of Shove (from the end of the VI century to the present era) were utilized and analyzed by means of an integral curve. We succeeded to elicit a cycle of approximately 650 years period, which appears to be composed of two half-cycles of approximately 325 years duration. Besides, on the curve are discernible 2 cycles of 900 - 1000 years duration. The multicentury norm of Wolf is ~43. The next solar cycle, representing a phase of lowered values of the current 325-years half-cycle, should be very low. [Translation of abstract].

SUB CODE: 03

Card

1/1

UDC 523.745

GOLUBTSOV, V.V.

Methods for the calculation of the runoff rates of small drainage basins in an arid zone. Trudy KazNIGMI no.18:29-34 '63.

Reaches and fluvial accumulation. Ibid.:42-48

(MIRA 17:4)



LAVRENT'YEV, P.F.; GOLUBTSOV, V.V.; YURINA, Ye.G.

Mean runoff and its variations in the lake basins of the  
Balkhash-Alakul' trough. Trudy KazNIGMI no.18:3-28 '63.  
(MIRA 17:4)

GOLUBTSOV, V.V.

Effect of secular changes in solar activity on the amount of water  
in rivers. Trudy KazNIGMI no.21:53-61 '64.

Expected norm of annual streamflow. Ibid.:62-72

(MIRA 17:11)

*GOLUBTSOVA, A.A.*

3-58-2-2/33

AUTHORS: Golubtsova, A.A., Doctor of Technical Sciences and Meshkov, V.V.,  
Professor, Doctor of Technical Sciences

TITLE: The Textbook and the Student's Independent Work (Uchebnik i  
samostoyatel'naya rabota studenta)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 2, pp 8-13 (USSR)

ABSTRACT: The supplying of the higher schools with approved text-  
books and training aids is far from perfect, either in quanti-  
ty or quality. The issue of 350 textbooks and training aids  
per year does not satisfy demands, and a great number of ap-  
proved textbooks and training aids, especially those on new  
scientific fields (automation, telemechanics, electronics,  
nuclear power, etc), have yet to be printed. The problems  
of coordinating the student independent work to give them  
full access to instructional literature is being studied.

Textbooks and training aids are divided into four groups:  
a) general theoretical subjects, taught in the first and  
second course (mathematics, physics, chemistry, descriptive  
geometry, theoretical mechanics, etc); b) general subjects,  
defining the scientific principles of the speciality (prin-  
ciples of electric engineering, thermal engineering, radio-

Card 1/4

The Textbook and the Student's Independent Work

3-58-2-2/33

technics, hydraulics, etc); c) general engineering subjects for non-specialists (e.g. electrical measurements, electrical machines, electrotechnical materials, elements of automatics and telemechanics, etc), i.e. for all student-electricians who do not specialize in these subjects; d) special basic subjects, which outline the trend and content of the student's speciality (area of concentration).

The textbook on general subjects, unlike the textbooks for the general theoretical courses, need not necessarily comply with the program. Textbooks on general engineering subjects should have a technical content, being encyclopedical in exposition. The content is defined by the engineering methods of computation, processes of operation, general principles and peculiarities of the constructional solutions of devices, apparatuses and machines. The content of the training aids on special basic subjects should be more esoteric than the content of a lecturing course. In the training aids on special basic subjects not only the established, commonly accepted technical solutions and methods should be presented, but also the unsolved questions and problems of the national economy must be taken up, and ways and means of solution indicated. The exposition of material on special basic

Card 2/4

The Textbook and the Student's Independent Work

3-58-2-2/33

subjects in the training aids should be connected with new technique, advanced practice, production and exploitation in the respective branch of national economy, and foreign experience. For the first 3 groups of subjects, the textbook must contain a systematic exposition of knowledge obligatory for every student, and the usual material. The situation is different with the educational literature for the special basic subjects. Instead of textbooks there should exist training aids containing not only the curriculum material but also material in excess of the program, reflecting the latest achievements in science and technique and the prospects of their development.

The textbooks compiled for vuz's should be founded on the methodical experience of the staff of the leading chairs. It is, therefore, expedient to entrust the compilation of textbooks to these staffs. Collectives are best for compiling textbooks on general theoretical and general subjects while it is more expedient to let only one author work on training aids for the special basic subjects.

To ensure a high quality of textbooks on all subjects, the competition method of compiling new textbooks should be practised more extensively, principally on general theoretical

Card 3/4

The Textbook and the Student's Independent Work

3-58-2-2/33

subjects.

ASSOCIATION: Moskovskiy energeticheskiy institut (The Moscow Power Engineering Institute)

AVAILABLE: Library of Congress

Card 4/4

GOLUBTSOVA, A.V.		PROCESS AND PROPERTIES INDEX	
BC		A-4	
<p>Ammonia production in the non-medullated nerve of the mollusc <i>Anodonta</i>. A. V. Golubtsova and J. L. Kamm (Bull. Biol. Med. Exp. U.R.S.S., 1936, 2, 130-133).—Electrical stimulation of the nerve in presence of dil. <math>H_2SO_4</math> results in a 370% increase in <math>NH_3</math> production. The increased <math>O_2</math> consumption in the presence of acid is probably due entirely to <math>NH_3</math> production. W. McC.</p>			
ASH-54 METALLURGICAL LITERATURE CLASSIFICATION			
LITERATURE INDEX		LITERATURE INDEX	
LITERATURE INDEX		LITERATURE INDEX	

GOLUBTSOVA, A. V.		PROCESS AND PROPERTIES INDEX	
ca	<p>The chemical nature of a substance in brain tissue sensitizing muscle to acetylcholine. A. V. Golubtsova and P. F. Mineev. <i>Byull. Eksp. Biol. Med.</i> 23, 109-72 (1947).—Brain emulsion of a frog was prepd. Eleven expts. were carried out to det. the sensitizing action (1) of a plain emulsion, (2) of emulsion boiled for 7 min. in neutral soln. (3) of the filtrate after pptn. of the proteins, and (4) of the same filtrate after 7-min. boiling with an equal vol. of 2 N HCl, on stomach muscle of a frog. Exposure to acetylcholine with unboiled, but especially with boiled emulsion caused greater contraction of the muscle than with acetylcholine alone. Emulsion alone did not cause contraction. The sensitizing substance is thermostable in neutral medium. The sensitizing effect is not lost by pptn. of protein from the emulsion with trichloroacetic acid. Boiling protein-free filtrate with HCl causes loss of the sensitizing action and splitting of compds. contg. labile phosphate groups present in the brain. Inorg. P in the protein-free filtrate increased with HCl hydrolysis about 22-30 mg. calcd. with respect to 100 g. brain tissue. It is assumed that the sensitizing substance in brain tissue is a compd. contg. labile phosphate groups. It is possible that the sensitizing action is caused not only by adenosine-triphosphoric acid and adenosinetriphosphate of brain origin, but also by polyphosphoric compds. in brain tissue, especially diphosphothiamine. W. R. R.</p>		11F
<p>ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>RECORD MAP ONE ONE</p>			
<p>RECORD ONE ONE ONE</p>			



GOLUBTSOVA, A. V.

6

CA

Metabolism of animal brain in reflex epilepsy. A. V. Golubtsova and T. P. Zhukova. *Vestnik Moskov. Univ.*, 6, No. 11, Ser. Fiz.-Mat. i Khim. Nauk No. 7, 87 (1961). — Brain homogenates of rats with reflex epilepsy (before or after the convulsive attack caused by bell-ringing stimulus) show an enhanced loss of glucose in anaerobic conditions, but no difference from the normal in the aerobic state. The amts. of lactic acid formed in the brain tissue in anaerobic conditions from glucose was the same in epileptic and control animals, as was respiration of brain tissue without added glucose. With added glucose the O consumption almost doubles in all cases. The brain tissue of epileptic animals after the attack has supernormal concn. of lactic acid and  $\text{NH}_4$ . G. M. Kowoloff

GOLUBTSEVA, ALV.

iii. Cerebral metabolism in reflexive response to - chain 2 Biochem.

GOLUBTSOVA, A.V.; MOISEYENKO, Ye.V.; SAFRONOVA, M.I.

Modification of cerebellar metabolism following X-irradiation. Biul.  
eksp.biol. i med. 42 no.9:36-39 S '56. (MLRA 9:11)

1. Iz kafedry biokhimii zhivotnykh Moskovskogo gosudarstvennogo  
universiteta imeni M.V.Lomonosova (rektor-akademik I.G.Petrovskiy)  
Predstavlena deystvitel'nym chlenom AMN SSSR S.Ye.Severinym  
(CEREBELLUM, effect of radiations,  
x-rays, metab. changes (Rus))  
(ROENTGEN RAYS, effects,  
on cerebellar metab. (Rus))

CA GOLUBTSOVA, E.A.

7

Photometric determination of tellurium in rabbit.  
E. A. Golubtsova. *Zavodskaya Lab.* 16, 623 (1950).—  
The sample is dissolved in 50% citric acid and hot, concd.  
HNO<sub>3</sub>. The sample then is evapd. and taken up with  
concd. HCl, then dild. and a clear supernatant aliquot, with  
a little gelatin added, is treated with SnCl<sub>2</sub> in 3 N HCl;  
the brown color caused by Te is photometrically measured.  
G. M. Kosolapoff

KHANIN, A.A.; GOLUBTSOVA, G.S.

Petrophysical properties of Eocene and Paleocene gas enclosing  
rocks in the Aleksandrovskoye gas field in central Ciscaucasia.  
Trudy VNIIGAZ no.10:32-43 '60. (MIRA 13:10)  
(Caucasus, Northern--Gas, Natural--Geology)

KHEL'KVIST, V.G.; BURLIN, Yu.K.; GOLUBTSOVA, G.S.

Some data on the stratigraphy, lithology, and physical properties  
of lower Cretaceous sediments in northern regions of Krasnodar  
Territory. Trudy VNIIGAZ no.10:62-71 '60. (MIRA 13:10)  
(Krasnodar Territory--Sediments (Geology))

ОДУБТОВА, С.С.

Gas reservoir rocks of the twelfth horizon in the Gash gas  
field. Trudy VNIIGAS no.20/280100-1980 (MIRA 1718)

89422

S/136/61/000/002/003/006  
E073/E335

26.2532

AUTHORS: Layner, D.I. and Golubtsova, L.M.

TITLE: Means of Improving the Thermo-electric Properties  
of the Semiconductor Alloy Zinc-antimony

PERIODICAL: Tsvetnyye metally, 1961,<sup>34</sup>No. 2, pp. 69 - 74

TEXT: In the first approximation the efficiency of a material for producing thermo-electricity can be estimated on the basis of the product  $\alpha^2 \sigma$  where  $\alpha$  is the thermo-electric coefficient,  $\mu V/^{\circ}C$ ;  $\sigma$  is the specific electrical conductivity  $ohm^{-1}cm^{-1}$ . Classical materials for producing thermo-electricity are: intermetallic ZnSb compounds and electron lead sulphide. ZnSb compounds form by a peritectic reaction at  $545^{\circ}C$ ; thereby the concentration of the components is 35 wt.% Zn and 65 wt.% Sb. Microscopic analysis indicates that for a Zn content below 35 wt.% the alloy contains Sb and SbZn which may be present as a eutectic and as larger crystals. Alloys containing Zn in quantities of 35-45 wt.% always contain a mixture of crystals of the two intermetallic

Card 1/8



89422

S/136/61/000/002/003/006  
EC73/E335

Means of Improving .....

compounds  $\text{SbZn}(\alpha)$  and  $\text{Sb}_3\text{Zn}_4(\beta)$ . The compound  $\text{SbZn}$  is a hole-type semiconductor (this compound was investigated by Ye.D. Devyatkova, Yu.I. Maslakovets and I.V. Mochan of the AS USSR). In determining the electrical conductivity various investigators used specimens of different sizes. On small specimens I.V. Mochan (Ref. 1) determined the values  $\sigma = 4 \times 10^{-3}$  and on larger specimens Ye.D. Devyatkova and Yu.I. Maslakovets (Ref. 2) obtained the value equalling  $80 \text{ ohm}^{-1} \text{ cm}^{-1}$ . The width of the barrier zone equals  $0.7 - 0.8 \text{ eV}$  (Ref. 1); the thermo-e.m.f. of the compound equals  $180 - 220 \mu\text{V/deg}$  and even the smallest shift in the ratio of the components reduces it considerably. The authors carried out experiments with a view to improving the thermo-electric properties of  $\text{ZnSb}$  compounds by introducing admixtures of various elements. A total of 150  $\text{ZnSb}$  compounds were tested which contained admixtures of various elements, both separate and combined: Cu; Ag; Bi; Si; Ge; Sn; Pb; In; Te; Al; Cd and Fe. The melting was in a high-frequency

Card 2/8

89422

S/136/61/000/002/003/006

E073/E335

## Means of Improving ....

induction furnace inside graphite crucibles. The basic components were introduced into the charge designed to produce 500 g of the alloy with an excess of zinc of 0.4% compared with the stoichiometric composition. Melting was carried out at 750-800 °C with careful mixing during the process. Teeming was into metallic moulds at a temperature of the order of 700 °C.

The sequence of feeding the charge was as follows:

a) Zn, admixtures, Sb for alloys with additions of low-melting point metals; b) charging Zn and Sb simultaneously and introducing the admixtures into the molten metal; this was done in the case of high melting-point admixtures. From the alloy, 8 x 10 x 15 mm specimens were pressed (4 tons/cm<sup>2</sup>) at 400 °C. The electric conductivity  $\sigma$  was measured by a compensation method, using probes for tapping-off the voltage. The thermo-e.m.f.  $\alpha$  was also measured by a compensation method relative to lead with a temperature difference of 18-20 °C. It was found that a great increase in the electric conductivity can be achieved by using additions of Cu, Ag and Ge. The obtained results for Cu are graphed in Fig. 1

Card 3/8

89422

S/136/61/000/002/003/006  
EO73/E335

Means of Improving ....

( $\alpha$ ,  $\mu\text{V/deg}$  and  $\sigma$ ,  $\text{ohm}^{-1}\text{cm}^{-1}$  as functions of the Cu content, %) for additions of Cu; in Fig. 2 - for additions of Ge (same notation); in Fig. 3 - for additions of Sn; in Fig. 4 - for additions of Bi and in Fig. 5 - for additions of In. In contrast to results of Devyatko and Maslakovets (Ref. 2), according to which the "hole" concentration reaches a maximum, for a content of 0.5% Sn the authors of this paper found a continuous increase in the electric conductivity with increasing Bi and Sn contents up to concentrations of 2%. Microstructural and X-ray-structural analyses did not reveal the presence of any new phase differing from  $\text{SbZn}$  and  $\text{Sb}_3\text{Zn}_4$ . All the

investigated alloys showed a qualitatively similar picture in the angular range  $10-40^\circ$ . However, certain changes in the intensity of the lines corresponding to  $\text{SbZn}$  were observed. Obviously, the change in properties is due to complicated structural processes in the crystal lattice, which require application of finer methods of analysis. Nomograms of the change in the properties of materials alloyed with elements of various groups of the periodic system indicate that the best results

Card 4/8

89422

S/136/61/000/002/003/006

E073/E335

Means of Improving .....

can be achieved if Ag, Cu or Ge are used. A considerable increase in the thermo-e.m.f. is achieved by additions of Sn and Si and a less intensive increase is achieved by the addition of Pb and Bi. An increase in the thermo-e.m.f. in the case of an alloy with Cd only or with Si only is accompanied by a sharp drop in the electric conductivity and is not of practical interest. For practical purposes, the best properties are achieved with additions of Sn, Pb, Bi in which the high thermo-e.m.f. are combined with a sufficiently high electric conductivity. Still better results can be obtained by alloying with several elements since, separately, none of these is able to ensure satisfactory properties. Good results were achieved with an alloy containing (% of the weight of the SbZn compound) 35 Zn, 65 Sb, 2 Bi and 1.5 Sn. By means of this alloy the following results were achieved:  $\alpha = 280-300 \mu\text{V/deg}$  for  $\sigma$  not less than  $200 \text{ ohm}^{-1} \text{ cm}^{-1}$  and  $\alpha^2 \sigma = 18-20$ . This alloy can be used successfully in the anode blocks of thermal batteries; 0.5% Ag is introduced into the heating blocks for

Card 5/8

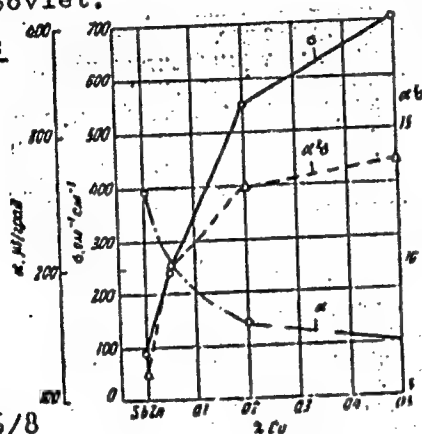
89422

S/136/61/000/002/003/006  
E073/E335

Means of Improving ....

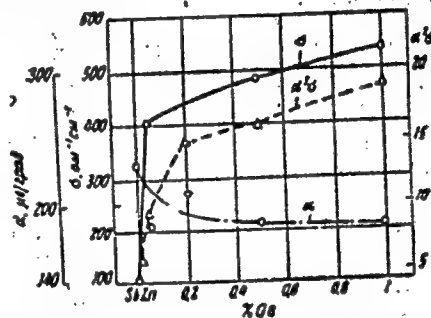
increasing the electric conductivity and in this case  
 $\alpha = 200 \mu\text{V/deg}$ ,  $\sigma = 700 \text{ ohm}^{-1} \text{ cm}^{-1}$  and  $\alpha \sigma = 30$ .  
There are 8 figures and 7 references: 5 Soviet and  
2 non-Soviet.

Fig. 1:



Card 6/8

Fig. 2:



Means of Improving ....

Fig. 3:

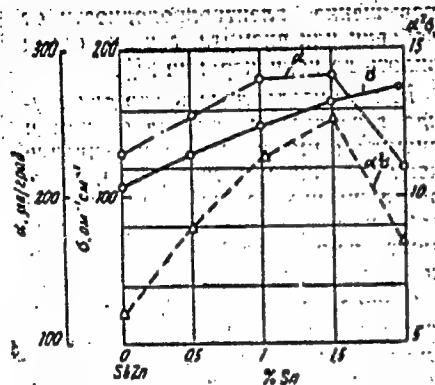


Рис. 3. Зависимость электрических свойств сплава от содержания олова

card 7/8

09422

S/136/61/000/002/003/006

E073/E335

Fig. 4:

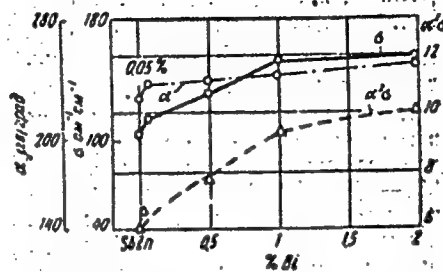


Рис. 4. Зависимость свойств сплава от содержания висмута

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Means of Improving ....

S/136/61/000/002/003/006  
E073/E335

Fig. 5:

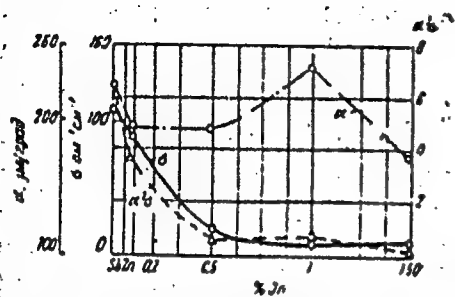


Рис. 5. Зависимость электрических свойств от содержания индия

Card 8/8

GOLUBTSOVA, M.V. [Golubtseva, M.V.]

Role of carotenoids in oxidation-reduction processes in plants.  
Pratsi Od. un. zbir. mol. vchen. un. 148 no.3:181-193 '58 (MIRA 13:3)

1. Nauchnyy rukovoditel' - akademik Ukrainskoy akademii sel'sko-  
khozyaystvennykh nauk, prof. S.I. Lebediev.  
(Oxidation, Physiological) (Carotenoids)



VORSHCHEVSKIY, E.I.; KISELEV, K.V., otv. red.; GOLUBTSOVA, P., red.;  
STEPANOVA, N., tekhn. red.

[International encouragement of scientific research in the field of control of cancerous diseases (proposal of the White Russia S.S.R. at the 14th session of the UN General Assembly); collected materials and documents] Mezhdunarodnoe pooshchrenie nauchnykh issledovaniy v oblasti bor'by s rakovymi zabolevaniyami (predlozhenie Belorusskoi SSR na XIV sessii General'noi Assamblei OON); sbornik materialov i dokumentov. Minsk, Gos.izd-vo BSSR. Red. sotsial'no-ekon.lit-ry, 1962. 161 p. (MIRA 15:5)

1. United Nations. General Assembly. Social, humanitarian and cultural committee. 2. Ministr inostrannykh del Belorusskoy SSR (for Kiselev). (CANCER RESEARCH)

GOLUBTSOVA, P.

TERUSHKIN, A.P.; UTKIN, N.M.; SHINKEVICH, N.I., kand.tekhn.nauk, dots.;  
GOLUBTSOVA, P., red.; TRUKHANOVA, A., tekhn.red.

[Handbook of mechanical drawing for engineers and builders] Spravochnik po inzhenerno-stroitel'nomu chercheniu. Pod red, N.I.Shinkevicha. Minsk, Gos. izd-vo BSSR. Red. nauchno-tekhn.lit-ry, 1958. 323 p.  
(Mechanical drawing) (MIRA 11:4)

BERGER, I.D.; GOLUBTSOVA, P., red.; TRUKHANOVA, A., tekhn. red.

[Instrument maker's handbook; for foremen and expert workers in instrument factories] Spravochnik instrumental'shchika; dlia masterov i kvalifitsirovannykh rabochikh instrumental'nykh tsekhov. Minsk, Gos. izd-vo BSSR, Red. nauchno-tekhn. lit-ry, 1958. 385 p. (Machine-shop practice--Handbooks, manuals, etc.) (MIRA 11:7)

*GOLUBTSOVA, P.*

BATIE, N.A., dots., kand. tekhn. nauk; BIRYUKOV, V.A., dots., kand. tekhn. nauk; MANENVICH, L.A., dots., kand. tekhn. nauk; GOLUBTSOVA, P., red.; KALECHITS, G., tekhn. red.

[Handbook of woodworking] Spravochnik po derevoobrabotke. Minsk, Gos. izd-vo BSSR, Red. nauchno-tekhn. lit-ry, 1958. 390 p.  
(Sawmills) (Woodwork) (MIRA 11:10)

ZHURAVSKIY, Ignatij Petrovich; GOLUBTSOVA, P., red.; KALECHITS, G.,  
tekhn.red.

[Painting] Maliarnoe delo. Minsk, Gos.izd-vo BSSR. Red.  
nauchno-tekhn.lit-ry, 1959. 134 p. (MIRA 13:2)  
(Painting, Industrial)

ATAYEV, S.S., kand.tekhn.nauk; ZALOGO, V.F., inzh.; KOROBOCHKIN, M.A.,  
inzh.; PEVZNER, E.D., kand.tekhn.nauk; ROGOVIN, Ya.A., inzh.;  
RAKUT', B.A., inzh.; RUBIN, V.I., inzh.; TIRKEL'TAUB, I.D.,  
inzh.; FROLOV, N.P., kand.tekhn.nauk; YANKOVSKIY, I.P., inzh.;  
MOROGOVSKIY, V.M., inzh., retsenzent; ZHIZHEL', I.M., inzh.,  
red.; KAZACHEK, G.A., red.; GOLUBTSOVA, P., red.; STEPANOVA,  
N., tekhn.red.

[Builder's handbook] Spravochnik mastera-stroitelia. Izd.4.,  
perer. i dop. Minsk, Gos.izd-vo BSSR. Red.nauchno-tekh.  
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1. White Russia. Ministerstvo gorodskogo i sel'skogo stroitel'-  
stva.

(Building)

AFANAS'YEV, N.N., dotsent, red.; GOLUBTSOVA, P., red.; STEPANOVA, N.,  
tekhn.red.

[Manual for rural builders] Spravochnik sel'skogo stroitel'sta.  
Pod obshchei red. N.N.Afanas'eva. Minsk, Gos.isd-vo BSSR, 1960.  
634 p. (MIRA 13:6)

1. White Russia. Glavnoye upravleniye po organizatsii stroitel'stva  
v kolkhozakh.

(Building)

FIKH, B.M., kand.istor.nauk; ARZHAYEVA, L.V.; BARSEGYAN, M.V., kand.  
istor.nauk; GOLUB, I.P.; GRIGOR'YEVA, Z.G., kand.istor.nauk;  
MARASH, Ya.N., kand.istor.nauk; MARKOVSKIY, D.S., kand.  
istor.nauk; PESTRAK, F.S.; GOLUBTSOVA, P., red.; SLAVYANIN, I.,  
tekhn.red.

[Grodno; historical study] Grodno; istoricheskiy ocherk. Minsk,  
Gos.izd-vo BSSR, Red.sotsial'no-ekon.lit-ry, 1960. 150 p.  
(MIRA 14:3)

(Grodno--History)

(Grodno--Economic conditions)



BAZYLEV, Timofey Andreyevich [Bazyleu, TS.]; ROGOVSKIY, Ivan  
Trifonovich [Rahouski, I.]; GOLUBTSOVA, P. [Holubtsova, P.],  
red.; STSYAPANOVA, N., tekhn. red.

[The communal economy of collective farms is the main source  
of the material prosperity of collective farmers] Hramad-  
skaia haspadarka kalhasau - asnova rostu dabrabytu kalhasnaha  
sialianstva. Minsk, Dziarzh. vyd-va BSSR. Red. satsyial'na  
ekanamichnai lit-ry, 1961. 60 p. (MIRA 15:2)  
(Collective farms)

MOROZOV, Vitaliy Dmitriyevich [Marozau, V.D.]; GOLUBTSOVA, P.  
[Galubtsova, P.], red.; NOVIKOVA, V., tekhn. red.

[Communism is the great goal of the party and the Soviet people]  
Kamunizm - vialikaia meta partyi i naroda. Minsk, Dziarzh. vyd-  
va BSSR. Red. satsyial'na-ekhanamichnai lit-ry, 1962. 77 p.  
(MIRA 15:12)

(Communism) (Russia—Economic policy)

BERDNIKOVA, K., otv. za vypusk; GOLUBTSOVA, P., red.; BELEN'KAYA, I.,  
tekhn. red.

[The national economy of White Russia; statistical abstract]  
Narodnoe khoziaistvo BSSR; statisticheskii sbornik. Minsk,  
Gos.izd-vo BSSR. Red.sotsial'no-ekon. lit-ry, 1963. 510 p.  
(MIRA 16:3)

1. White Russia. Statisticheskoye upravleniye.  
(White Russia--Statistics)

157 AND 158 CODES										159 AND 160 CODES									
PROCESSES AND PROPERTIES INDEX																			
CA										7									
<p>Analysis of zinc alloys. R. B. Golubtsova. Zashchita <i>Lab.</i> 11, 1112-13(1945).—The object was to develop a rapid and accurate method to det. Al, Cu, and Fe in Zn alloys: Al 6-20, Cu 0.2-1.0, Pb ~ 1.0, Fe 1.0-4.0% (the remainder Zn). Dissolve a 0.5-g. sample in HNO<sub>3</sub> (1:1), boil to remove N oxides, and electrolyze to remove Cu and Pb. In the presence of Pb, add 2 ml. of H<sub>2</sub>SO<sub>4</sub> (d. 1.84) 10-15 min. after the sepn. of all Pb and continue the electrolysis until the soln. decolorizes; in the absence of Pb add H<sub>2</sub>SO<sub>4</sub> before the electrolysis. Evap. the soln. until SO<sub>3</sub> vapors appear, dissolve the dry residue in hot distil. water, add 30-40 ml. of 20% base to the soln., filter the Fe(OH)<sub>3</sub> formed after the heating, Zn on the Cu-plated cathode, filter, and det. Al in the filtrate by the hydroxyquinoline method. Satisfactory results were obtained. The mean duration of the analysis was 3.5 hrs. the current strength 1.2 amp., the potential 4.5-5.0 v. and the temp. not higher than 20°. At higher than 20° the pptn. of Zn on the cathode is slow and the ppt. is not dense. The Fe in the Zn alloy can be detd. either during the analysis by reducing it with SnCl<sub>2</sub> according to Reinhardt or with a primary Al shaving, or by detg. Fe in a sep. sample [dissolve the sample in 150 ml. of H<sub>2</sub>SO<sub>4</sub> (1:1), filter the Cu, and titrate FeSO<sub>4</sub> with MnO<sub>4</sub><sup>-</sup>]. W. R. Heun</p>																			
A 58-51A METALLURGICAL LITERATURE CLASSIFICATION																			
FROM SYNOPTIC										FROM INDEX									
GROUPS										RELATIONS									
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20										21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40									

100-41. New Method for Determination of Tungsten in Steel Using D-Naphthoquinone. (In Russian.) H. B. Golubitsky. Zhurnal Analiticheskoi Khimii (Journal of Analytical Chemistry), 1948, March-April 1948, p. 118-122.

Compound is recommended for qualitative precipitation of small or large amounts of tungsten. Of all the elements present in steel, only W and Mo react with this compound. Reaction with Mo may be eliminated by proper adjustment of acidity.

Metallurgical Literature Classification

FROM: SCHENK  
011111 ONE ONE 111

GOLUETSOVA, R. B., ENGINEER

Cand Tech Sci

Dissertation: "Methods for Determination of Wolfram, Molybdenum and Columbians in Steel with the Aid of the Newest Organic Reagents."

2 March 49

All-Union Inst of Aviation Materials.

SO Vecheryaya Moskva  
Sum 71

---

GOLUBTSOVA, R. B.

17719

USSR/Chemistry - Columbium Compounds Jan/Feb 51

"Determination of Columbium in High Alloy Steels  
Not Containing Wolfram," R. B. Golubtsova, All-  
Union Sci Res Inst of Avn Materials

"Zhur Analit Khim" Vol VI, No 1, pp 34-38

Proposed method for detn of 0.4%-several % Cb in  
high alloy steels contg Ti, V, and Mo, but not  
contg W. Method is simple and requires no  
scarce reagents.

17719

87

Determination of tungsten and niobium in high alloyed alloys. R. B. Golubtsova. *Zhur. Anal. Khim.* 6, 357 (1951).—Dissolve the sample in 60 ml. of 6 N HCl, oxidize with 5 ml. HNO<sub>3</sub>, evap. to a paste, dry, add 40 ml. of 6 N HCl, heat for 1 hr. covered, add 100 ml. hot H<sub>2</sub>O, and 6 N HCl, heat for 1 hr. Filter, wash the ppt. with 10% HCl followed by 2% NH<sub>4</sub>NO<sub>3</sub>, ignite, and remove Si with HF and H<sub>2</sub>SO<sub>4</sub>. Fuse the residue with 5 g. of KNaCO<sub>3</sub>, leach with H<sub>2</sub>O, add a soln. of 1 g. MgSO<sub>4</sub>, 2 g. NH<sub>4</sub>Cl, and 2 ml. of NH<sub>4</sub>OH in 25 ml. of H<sub>2</sub>O, cover, and keep on the steam bath for 1 hr. Filter; the ppt. contains Nb and the filtrate W. Wash with a satd. soln. of NH<sub>4</sub>Cl, transfer the ppt. and washings to the original container, add 30 ml. of 6 N NH<sub>4</sub>Cl, and neutralize to methyl orange. Nb can also be detd. by pptn. with tannin or gallic acid. In alloys contg. Ti the Cl<sub>2</sub>O<sub>3</sub> ppt. should be tested colorimetrically for Ti. Boil the filtrate contg. W with HCl to decomp. the carbonate, ppt. W with β-naphthoquinoline, 6-toluquinoline, or pyramikon, ignite and weigh the WO<sub>3</sub>. In alloys contg. Mo 1.5% W is detd. colorimetrically. M. Hosh

1952



"APPROVED FOR RELEASE: 06/13/2000

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CIA-RDP86-00513R000515920011-7"

GOLUBTSOVA, R. R.

Colour reactions for detecting cobalt and bismuth. Zhur. anal.  
khim. 11 no.6:694-697 N-D '56. (MLBA 10:6)

1. Institut metallurgii im. A.A. Baykova Akademii nauk SSSR.  
(Colorimetry) (Cobalt) Bismuth)

G. LUBTSOVA, R. B.

2

chem

Colorimetric determination of small amounts of aluminum in chromium-nickel and magnesium alloys. G. L. Lubtsova and R. B. ... Zashch. Lab., 1956, 22 (2), 161-162. Methods based on the use of "arsenazo" are described. To determine Al in chromium-nickel alloys, the sulphate solution obtained after an initial attack on the sample (0.1 g) with HCl and HNO<sub>3</sub> followed by evaporation with H<sub>2</sub>SO<sub>4</sub> is electrolyzed with a mercury cathode, and the electrolyte is then evaporated and made up to 50 or 100 ml in a calibrated flask. An aliquot portion is treated with cupferron to remove Ti, Zr and Nb, the excess reagent is removed from the filtrate by evaporation with H<sub>2</sub>SO<sub>4</sub> and HNO<sub>3</sub>, and the solution is evaporated until H<sub>2</sub>SO<sub>4</sub> is completely removed. The residue is dissolved in water, the solution is ... and then mixed with the reagent ...

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**APPROVED FOR RELEASE: 06/13/2000**

**CIA-RDP86-00513R000515920011-7"**

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000515920011-7

Electrolysis for the electrolytic separation of the latex

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"APPROVED FOR RELEASE: 06/13/2000

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**CIA-RDP86-00513R000515920011-7"**

78-3-3-30/47

AUTHORS: Golubtsova, R. R., Mashkovich, L. A.

TITLE: The Investigation of Metallic Compounds in Polycomponent Alloys on the Basis of Nickel (Issledovaniye metallicheskih soedineniy v mnogokomponentnom splave na nikelovoy osnove)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 3, pp. 717-721 (USSR)

ABSTRACT: The metallic compounds in polycomponent alloys on the basis of nickel were investigated. The number of components in these alloys is nine. The investigations of the microstructure of these alloys are characterized by three phases:  
 1) the  $\gamma$ -phase of the solid nickel solutions  
 2) a metalloid phase  
 3) a carbide phase

The phases were isolated by the use of new electrolytes by an electrochemical process. The following electrolytes were used: 10 %  $H_2SO_4$  and 50 ml  $HNO_3$  + 20  $HClO_4$ . In spite of the use of electrolytes with complex-formers such as succinic acid or citric acid no quantitative isolation by electrochemical

Card 1/2

78-3 3-30/47

The Investigation of Metallic Compounds in Polycomponent Alloys on the Basis of Nickel

processes takes place. Beside the carbides of titanium and niobium in the form of solid solutions elements such as tungsten, molybdenum, nickel, chromium and aluminum occur. The carbide phase has face-centered cubic lattices. The investigations showed that a quantitative separation of the carbide phase from metalloid inclusions by the flotation method is possible. There are 6 tables and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR  
(Metallurgical Institute imeni A. A. Baykov, AS USSR)

SUBMITTED: June 25, 1957

Card 2/2

AUTHOR: Golubtsova, R. B. 78-3 3-34/47

TITLE: ~~Discussion on Lectures~~ (Obsuzhdeniye dokladov)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 3,  
pp 728-729 (USSR)

ABSTRACT: R.B. Golubtsova takes an attitude against the lecture by Yu.A. Bagaryatskiy and says that this explanations must be based on a misunderstanding. She says that the nickel-titanium system had been investigated in the first work. No other compound can form where the compound  $Ni_3Ti$  is formed. In investigating the nickel-aluminum system the researchers did not work with "Nimonik" but with alloys containing up to 10% aluminum. There is no carbon and only little titanium (1,66%) contained in these alloys. The formation of the  $\gamma$ -phase takes place here which has  $Ni_3Al$  as basis. The results can be well reproduced. It was not possible to refer to titanium as there was not enough of it present; it apparently dissolves only partly in these compounds.

Card 1/1

GOLUBTSOVA, R. B.

AUTHOR:

Golubtsova, R. B.

20-o-25/58

TITLE:

Investigation of a Metallic Compound Forming in Iron-Titanium Alloys  
(Issledovaniya metallichesкого soedineniya, obrazuyushchegosya  
v splavakh zhelezo-titan).

PERIODICAL:

Doklady AN SSSR, 1958, Vol. 118, pp. 89-91 (USSR).

ABSTRACT:

The compounds  $Fe_3Ti$  and  $Fe_2Ti$  together with phase diagrams are known from publications (reference 1-7). Isolation, composition and structure of  $Fe_2Ti$  are studied in the present paper. According to the phase diagram given (figure 1) alloy 1) corresponds to the solid solution of titanium in iron ( $Fe = 98,99\%$ ;  $Ti = 1,02\%$ ), whereas the content of  $Fe_2Ti$  in alloy 2) amounts to about  $57\%$ . For the purpose of selecting the optimum composition of the electrolyte the electrode potential of the alloy of the solid solution with  $98,99\%$  Fe and  $1,02\%$  Ti as well as of the alloy which contains the phase  $Fe_2Ti$  was measured. A saturated calomel-electrode was used for this (references 8,9). The results are given in table 1. The yield of precipitated powder is very much dependent on the current density selected. The best results were attained in the case of  $0,1 \text{ a/cm}^2$  when an anodic dissolution of the alloy Fe - Ti in  $2\%$  HCl (volume-%) at

Card 1/3

## Investigation of a Metallic Compound Forming in Iron-Titanium Alloys. 20-1-25/58

different current densities was performed. The purity of the separated phase is not influenced by the current density. Preliminary tests performed with imitating mixtures of Fe - Ti showed that the here-described method of the determination of iron in the presence of substantial quantities of titanium is reliable and accurate. The results of analysis showed a good repeatability of the tests. The results of a microchemical analysis of the anode-powders which were precipitated in various electrolytes are recorded in table 3. The well repeatable tests (table 3) show that in the iron-titanium alloy investigated the metallic compound  $\text{Fe}_2\text{Ti}$  of a stoichiometrical composition is precipitated. It has a ratio Fe : Ti = 2,33 : 1 (weight %/o) and 2 : 1 (atom-%/o). The test results prove the purity of the separated phase (absence of the solid solution in the compound  $\text{Fe}_2\text{Ti}$ ).

As well the X-ray-structural analysis as a material-chemical balance of the products of electrolysis in various electrolytes and at various current densities showed a good agreement of the results in relation to the loss in weight of the anode (table 4). There are 4 figures, 4 tables, and 10 references, 5 of which are Slavvic.

Card 2/3

Investigation of a Metallic Compound Forming in Iron-Titanium Alloys. 20-1-25/58

ASSOCIATION. Institute for Metallurgy imeni A. A. Baykov AN USSR (Institut metallurgii imeni A. A. Baykova Akademii nauk SSSR).

PRESENTED. July 4, 1957, by I. P. Bardin, Member of the Academy.

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AVAILABLE. Library of Congress.

Card 3/3

5 (2)

AUTHORS: Golubtsova, R. B., Mashkovich, L. A. SOV/62-59-6-3/36

TITLE: Investigation of Metallic Compounds in Multicomponent Nickel Alloys With Variable Content of Titanium Carbide (Issledovaniye metallicheskih soyedineniy v mnogokomponentnykh nikelovykh splavakh s peremennym sodержaniyem karbida titana)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp 971-974 (USSR)

ABSTRACT: The investigation of side reactions in multicomponent systems is of special importance for the discovery of new metallic alloys with given physical properties. In this connection the excess phases which form in the system mentioned were investigated in the course of the investigation reported here by physico-chemical analysis (as in reference 3 Kornilov, Pryakhina, Ozhimkova). As initial material the sixcomponent alloy Ni-(basic metal)-Cr-Mo-W-Nb-Al was used. These alloys contained 0.1, 1.0, 4.0, 7.5 % TiC. Table 1 gives the data of the chemical analysis of the melt. In the intermetallide analysis, which was worked out by the authors in reference 7, the excess phase of Ti(Nb, W, Mo, Cr)C was electrolytically separated at the anode as powder (Data of the analysis of the powder in

Card 1/2



Investigation of Metallic Compounds in Multi-  
component Nickel Alloys With Variable Content of Titanium Carbide

SOV/62-59-6-3/36

table 2). Thus it proves that the alloy consisted of only two phases: a solid  $\gamma$ -nickel solution, and the carbide phase of the above indicated composition. Radiographic investigations showed that the carbide phase has a cubic, face-centered lattice which corresponds to the lattice of the  $TiC$ , the parameter of which only varies in dependence on the  $NbC$  and  $TiC$  content (Different carbide content of the separated carbide phase in table 3). Tables 1-4 show the microstructure of the alloys with different  $TiC$  content. A. Ya. Snetkov carried out the X-ray analysis. There are 4 figures, 3 tables, and 10 references, 9 of which are Soviet.

ASSOCIATION: Institut metallurgii Akademii nauk SSSR (Institute of Metallurgy of the Academy of Sciences, USSR)

SUBMITTED: October 12, 1957

Card 2/2

5(2),5(3)

AUTHOR: Golubtsova, R. B.

SOV/75-14-4-23/30

TITLE: Determination of Molybdenum in Alloys With 8-Mercaptoquinoline

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 4, pp 493-496 (USSR)

ABSTRACT: The author developed a photometric method for the determination of molybdenum in complicated alloys by means of 8-mercaptoquinoline. 8-mercaptoquinoline forms with molybdenum a green inner complex salt which can easily be extracted from acid solutions by toluene. Bankovskiy (Ref 3) found the composition of this complex which corresponds to the formula  $\text{MoO}_2(\text{C}_9\text{H}_6\text{NS}) \cdot \text{H}_2\text{O}$ . The detection limit of the developed method is 0.2% of molybdenum in a maximum dilution of 1 : 1,000,000. Ascorbic acid does not influence the coloring of the toluene extract, thus the disturbing influence of iron can be eliminated by ascorbic acid. Oxalic acid cannot be used for masking iron as it changes the coloring of the extract. Tungsten can be masked with succinic acid or concentrated phosphoric acid. Table 1 lists those quantities of Co(II), Cr(III), W(VI), Fe(II), V(V), Ni(II),

Card 1/3

Determination of Molybdenum in Alloys With  
8-Mercaptoquinoline

SOV/75-14-4-23/30

Ta(IV), and Al(III) in the presence of which the determination of 1  $\mu$  of molybdenum at pH 1 is possible. The author also investigated the influence of the acidity of the solution on the completeness of the extraction of the molybdenum complex. He found that in 1 - 10 N hydrochloric acid the molybdenum complex is quantitatively extracted by toluene. The extraction from solutions combined with sulphuric acid is quantitative with acidities  $> 3$  N. The green color of the extract is stable with respect to time. The corresponding measurements are given in table 2. The solutions of the molybdenum complex in toluene follow in the range of 1 to 10  $\mu$  molybdenum per ml Beer's law. The results of the determinations of molybdenum in nickel alloys by using 8-mercaptoquinoline are given in table 3, and those in titanium alloys with 1.5% chromium in table 4. The method permits the determination of molybdenum in the presence of large quantities of titanium without separation. The weighed in sample of the alloy is only 0.01 g. The weighings were made on a

Card 2/3

Determination of Molybdenum in Alloys With  
8-Mercaptoquinoline

SOV/75-14-4-23/30

torsion micro-balance VT-20 of the firm "Tekstil'pribor".  
The whole procedure of the analysis from the decomposition of  
the alloy to the photometric determination of molybdenum is  
described in detail in this paper. The author thanks Yu. A.  
Bankovskiy and N. A. Uyedinova who put at his disposal the  
8-mercaptoquinoline. There are 3 figures, 4 tables, and  
3 Soviet references.

ASSOCIATION: Institut metallurgii im. A. A. Baykova AN SSSR, Moskva  
(Institute of Metallurgy imeni A. A. Baykov, AS USSR, Moscow)

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Card 3/3